



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,426	03/21/2001	Timothy S. DeBruine	1104-041	4082
27820	7590	05/24/2006	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C. P.O. BOX 1287 CARY, NC 27512			DELGADO, MICHAEL A	
			ART UNIT	PAPER NUMBER
			2144	

DATE MAILED: 05/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/814,426	DEBRUINE ET AL.	
	Examiner	Art Unit	
	Michael S. A. Delgado	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

In response to argument that the server function is not taught in the prior art. A server according to Newton's Telecom Dictionary at page 659 is "A server is a program which provides some service to other (client) programs. The connection between a client program and the server program is traditionally by message passing, often over a local area or wide area network, and uses some protocol to encode the client's requests and the server's responses. Any given program may be capable of acting as both a client and a server, perhaps switching its role based on the nature of the connection. The terms "client" and "server" simply refer to the role that the software program performs during a specific connection. Similarly, any given server may function as an origin server, a proxy server, a gateway server, or a tunnel, modifying its behavior based on the specific nature of a given request from a client". The service of a router, as disclosed in US Patent No. 6,510,154 by Mayes et al, in providing connectivity information to a user (client) under the above definition makes it a server. This conclusion is further supported by the evidence of US Publication No. 2003/0050962 by Monsen et al in which a router is disclosed to function as a server (Para 0007, lines 1-5).

A peer-to-peer network according to Newton's Telecom Dictionary at page 561 is "A network (typically a local area network) in which every node has equal access to the network and can send and receive data at any time without having to wait for permission from a control node. While peer-to-peer resource sharing is effective in small networks, security and reliability issues prevent its widespread use in larger networks."

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-43 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,510,154 by Mayes et al.

In claim 1, Mayes teaches about a method for optimizing private network “enterprise network” file transfers in a peer-to-peer public network (Fig 2), the peer-to-peer public network “internet” including a plurality of nodes (Fig 2, 56, 52), wherein at least two of the node are part of a same private network (Fig 2, 56, 52, 48), the method comprising the steps of (Fig 2):

(a) receiving by the server (router 48 function) a search request from a first node for a file (Col 4, line 65-Col 5 line 5) (Col 3, lines 25-45); (a search constitute the following operations).

(b) determining by the server that the file is stored on a second node (Col 4, line 55-Col 5, line 5);

(c) determining by the server that the first and second nodes are part of the same private network (Col 4, line 55- Col 5, line 5); and

(d) sending instructions by the server to the first node to request the files from the second node, such that the second node transfers the file to the first node over the private network (Col 4, line 55- Col 5, line 5).

In claim 2, Mayes teaches about a method of claim 1 further wherein step (a) includes the step of registering a client IP address, a subnet mask, and a peer IP address of both the first and second nodes with the server (Col 4, line 55- Col 5, line 5). (This is consistent with a router table within a router).

In claim 3, Mayes teaches about a method of claim 2 wherein step (a) further includes the step of registering with the server whether network address translation (NAT) has been performed on the first and second nodes and whether the first and second nodes are directly reachable from other nodes on the public network or unreachable (Col 5, lines 45-55), (Col 6, lines 40-50); (This is done during ICMP operation).

In claim 4, Mayes teaches about a method of claim 3 wherein step (a) further includes the step of determining that NAT has been performed on a particular node when the node's client IP address does not match the node's peer IP address (Col 6, lines 40-50).

In claim 5, Mayes teaches about a method of claim 4 wherein step (a) further includes the step of determining that a particular node is directly reachable from other nodes on the public network when the server can connect with the node using the node's client IP address (Col 6, lines 40-50). (Without a NAT in between source and destination this is expected result).

In claim 6, Mayes teaches about a method of claim 2 wherein step (a) further includes the step of storing the client IP address, a subnet mask, and a peer IP address of both the first and second nodes in a node registry (Col 4, line 55- Col 5, line 5) (Col 11, lines 50-60). (This is consistent with a router table within a router).

In claim 7, Mayes teaches about a method of claim 1 wherein step (a) further includes the step of allowing a user of the first node to enter search terms for finding a particular file (Col 3, lines 25-35).

In claim 8, Mayes teaches about a method of claim 7 wherein step (b) further includes the steps of querying a database containing file names with the search terms to find file names matching the search terms, and by identifying nodes containing the matching file, including the second node (Col 3, lines 25-35).

In claim 9, Mayes teaches about a method of claim 4 wherein step (c) further includes the steps of:

(i) determining that the second node is part of the same private network as the first node, and therefore locally reachable by the first node, when (Col 4, line 55- Col 5, line 5)

(1) NAT has been performed on both the first and second nodes and at the peer IDs of both the first and second nodes match, or (Col 6, lines 15-25)

(2) NAT has not been performed on either the first and second nodes and the subset IDs of each first and second nodes match (Col 3, lines 25-35).

In claim 10, Mayes teaches about a method of claim 9 wherein step (c) further includes the steps of:

- (ii) returning a list of search results from the server to the first node, where the list includes the identities and addresses of the matching nodes, IP addresses, and subnet masks (Col 3, lines 25-35),

In claim 11, Mayes teaches about a method of claim 10 wherein step (c)(ii) further includes the step of sorting the search results first by locally reachable nodes followed by the directly reachable nodes (Col 3, lines 25-35).

In claim 12, Mayes teaches about a method of claim 10 wherein step (d) further includes the steps of:

- (i) using the client IP address of the second node to send a request for the file from the first node to the second node (Col 6, lines 40-50); and
- (ii) sending the file from the second node to the first node using the client IP address of the first node (Col 6, lines 40-50).

In claim 13, Mayes teaches about a peer-to-peer public network, comprising at least one server coupled to the public network (Fig 2, 34);

a first plurality of nodes coupled to the public network (Col 5, lines 5-15); (The many destination on the internet)

a private network “Enterprise Network” including first and second nodes (Fig 2, 56, 52) coupled to the public network, wherein when the server receives a search request from a first node for a file, the server (Col 4, line 55- Col 5, line 5) (Col 3, lines 25-45).

determines that the file is stored on the second node (Col 3, lines 25-35) (Col 4, line 55- Col 5, line 5),

determines that the first and second nodes are part of the same private network (Col 4, line 55- Col 5, line 5), and

sending instructions to the first node to request the file from the second node, such that the second node transfers the file to the first node over the private network (Col 3, lines 25-35) (Col 4, line 55- Col 5, line 5).

In claim 14, Mayes teaches about a network of claim 13 wherein a client IP address, a subnet mask, and a peer IP address of both the first and second nodes are registered with the server (Col 4, line 55- Col 5, line 5). (This is consistent with a router table within a router).

In claim 15, Mayes teaches about a public network of claim 14 wherein the server registers whether network address translation (NAT) has been performed on the first and second nodes and whether the first and second nodes are directly reachable from other nodes on the public network or unreachable (Col 5, lines 45-55) (Col 6, lines 40-50). (This is done during ICMP operation).

In claim 16, Mayes teaches about a public network of claim 15 wherein it is determined that NAT has been performed on a particular node when the node's client IP address does not match the node's peer IP address (Col 6, lines 40-50).

In claim 17, Mayes teaches about a public network of claim 16 wherein it is determined that a particular node is directly reachable from other nodes on the public network when the server can connect with the node using the node's client IP address (Col 6, lines 40-50). (Without a NAT in between source and destination this is expected result).

In claim 18, Mayes teaches about a public network of claim 17 wherein the client IP address, a subnet mask, and a peer IP address of both the first and second nodes are stored in a node registry (Col 4, line 55- Col 5, line 5) (Col 11, lines 50-60). (This is consistent with a router table within a router).

In claim 19, Mayes teaches about a public network of claim 13 wherein a user of the first node enters search terms for finding a particular file (Col 3, lines 25-35).

In claim 20, Mayes teaches about a public network of claim 18 wherein it is determined the file is stored on the second node by querying a database containing file names with the search terms to find file names matching the search terms, and by identifying nodes containing the matching file, including the second node (Col 3, lines 25-35).

In claim 21, Mayes teaches about a public network of claim 16 wherein it is determined that the second node is part of the same private network as the first node, and therefore locally reachable by the first node, when 1) NAT has been performed on both the first and second nodes

and at the peer IDs of both the first and second nodes match, or 2) NAT has not been performed on either the first and second nodes and the subnet IDs of each first and second nodes match (Fig 2) (Col 4, line 55- Col 5, line 5).

In claim 22, Mayes teaches about a public network of claim 21 wherein the server returns a list of search results is returned to the first node, where the list includes the identities and addresses of the matching nodes, IP addresses, and subnet masks (Col 3, lines 25-35).

In claim 23, Mayes teaches about a public network of claim 22 wherein the search results are sorted first by locally reachable nodes followed by the directly reachable nodes (Col 3, lines 25-35).

In claim 24, Mayes teaches about a public network of claim 22 wherein the client IP address of the second node is used to send a request for the file from the first node to the second node, and the file from the second node is sent to the first node using the client IP address of the first node (Col 6, lines 40-50).

In claim 25, Mayes teaches about a computer readable medium containing program instructions for optimizing private network “Enterprise network” file transfers in a peer-to-peer public network, the peer-to peer public network “internet” including a plurality of nodes, wherein at least two of the node are part of a same private network (Fig 2, 52, 56), the program instructions for (Fig 2) (Col 3, lines 50-65):

(a) receiving by the server a search request from a first node for a file (Col 3, lines 25-45);

Art Unit: 2144

(b) determining by the server that the file is stored on a second node (Col 4, line 55- Col 5, line 5);

(c) determining by the server that the first and second nodes are part of the same private network (Col 4, line 55- Col 5, line 5); and

(d) sending instructions by the server to the first node to request the files from the second node, such that the second node transfers the file to the first node over the private network (Col 4, line 55- Col 5, line 5).

In claim 26, Mayes teaches about a computer readable medium of claim 25 further wherein instruction (a) includes the instruction of registering a client IP address, a subnet mask, and a peer IP address of both the first and second nodes with the server (Col 4, line 55- Col 5, line 5). (This is consistent with a router table within a router).

In claim 27, Mayes teaches about a computer readable medium of claim 26 wherein instruction (a) further includes the instruction of registering with the server whether network address translation (NAT) has been performed on the first and second nodes and whether the first and second nodes are directly reachable from other nodes on the public network or unreachable (Col 5, lines 45-55) (Col 6, lines 40-50). (This is done during ICMP operation).

In claim 28, Mayes teaches about a computer readable medium of claim 27 wherein instruction (a) further includes the instruction of determining that NAT has been performed on a

Art Unit: 2144

particular node when the node's client IP address does not match the node's peer IP address (Col 6, lines 40-50).

In claim 29, Mayes teaches about a computer readable medium of claim 28 wherein instruction (a) further includes the instruction of determining that a particular node is directly reachable from other nodes on the public network when the server can connect with the node using the node's client IP address (Col 6, lines 40-50).

In claim 30, Mayes teaches about a computer readable medium of claim 26 wherein instruction (a) further includes the instruction of storing the client IP address, a subnet mask, and a peer IP address of both the first and second nodes in a node registry (Col 4, line 55- Col 5, line 5) (Col 11, lines 50-60). (This is consistent with a router table within a router).

In claim 31, Mayes teaches about a computer readable medium of claim 25 wherein instruction (a) further includes the instruction of allowing a user of the first node to enter search terms for finding a particular file (Col 3, lines 25-35).

In claim 32, Mayes teaches about a computer readable medium of claim 30 wherein instruction (b) further includes the instructions of querying a database containing file names with the search terms to find file names matching the search terms, and by identifying nodes containing the matching file, including the second node (Col 3, lines 25-35).

In claim 33, Mayes teaches about a computer readable medium of claim 28 wherein instruction (c) further includes the instructions of:

(i) determining that the second node is part of the same private network as the first node, and therefore locally reachable by the first node, when (Col 4, line 55- Col 5, line 5)

(1) NAT has been performed on both the first and second nodes and at the peer IDs of both the first and second nodes match (Col 4, line 55- Col 5, line 5), or

(2) NAT has not been performed on either the first and second nodes and the subnet IDs of each first and second nodes match (Col 6, lines 15-25).

In claim 34, Mayes teaches about a computer readable medium of claim 33 wherein instruction (c) further includes the instructions of:

(ii) returning a list of search results from the server to the first node, where the list includes the identities and addresses of the matching nodes, IP addresses, and subnet masks (Col 3, lines 25-35).

In claim 35, Mayes teaches about a computer readable medium of claim 34 wherein instruction (c)(ii) further includes the instruction of sorting the search results first by locally reachable nodes followed by the directly reachable nodes (Col 3, lines 25-35).

In claim 36, Mayes teaches about a computer readable medium of claim 34 wherein instruction (d) further includes the instructions of:

(i) using the client IP address of the second node to send a request for the file from the first node to the second node; and

(ii) sending the file from the second node to the first node using the client IP address of the first node.

In claim 37, Mayes teaches about a method for optimizing private network “enterprise network” file transfers in a peer-to-peer public network “internet”, the peer-to-peer public

network including a server and a plurality of nodes, wherein a first node and a second node (Fig 2, 48, 52, 56) are part of a same private network, the method comprising the steps of (Fig 2):

- (a) registering with the server whether network address translation (NAT) has been performed on the first and second nodes and whether the first and second nodes are directly reachable from other nodes on the public network (Col 5, lines 45-55) (Col 6, lines 40-50);
- (b) receiving a search request from the first node for a file (Col 3, lines 25-35);
- (c) determining that the file is stored on the second node (Col 4, line 55- Col 5, line 5);
- (d) determining that the second node is part of the same private network as the first node, and therefore locally reachable by the first node (Col 4, line 55- Col 5, line 5), when
 - (i) NAT has been performed on both the first and second nodes and at the peer IDs of both the first and second nodes match (Col 6, lines 40-50),or
 - (ii) NAT has not been performed on either the first and second nodes and the subnet IDs of each first and second nodes match (Col 6, lines 40-50).
- (e) sending instructions by the server to the first node to request the files from the second node, such that the second node transfers the file to the first node over the private network (Col 4, line 55- Col 5, line 5).

In claim 38, Mayes teaches about a method of claim 37 further wherein step (a) includes the step of registering a client IP address, a subnet mask, and a peer IP address of both the first

and second nodes with the server (Col 4, line 55- Col 5, line 5). (This is consistent with a router table within a router).

In claim 39, Mayes teaches about a method of claim 38 wherein step (a) further includes the step of determining that NAT has been performed on a particular node when the node's client IP address does not match the node's peer IP address (Col 6, lines 40-50).

In claim 40, Mayes teaches about a method of claim 39 wherein step (a) further includes the step of determining that a particular node is directly reachable from other nodes on the public network when the server can connect with the node using the node's client IP address (Col 6, lines 40-50). (Without a NAT in between source and destination this is expected result).

In claim 41, Mayes teaches about a method of claim 40 wherein step (d) further includes the step of returning a list of search results from the server to the first node, where the list includes the identities and addresses of the matching nodes, IP addresses, and subnet masks (Col 3, lines 25-35).

In claim 42, Mayes teaches about a method of claim 41 wherein step (d) further includes the step of sorting the search results first by locally reachable nodes followed by the directly reachable nodes (Col 3, lines 25-35).

In claim 43, Mayes teaches about a method of claim 42 wherein step (e) further includes the steps of:

- (i) using the client IP address of the second node to send a request for the file from the first node to the second node (Col 6, lines 40-50); and

(ii) sending the file from the second node to the first node using the client IP address of the first node (Col 6, lines 40-50).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,058,431 by Srisuresh et al. teaches about a system and method for network address translation as an external service in the access server of a service provider.

US 6,381,646 by Zhang et al. teaches about a multiple network connections from a single PPP link with partial network address translation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael S. A. Delgado whose telephone number is (571) 272-3926. The examiner can normally be reached on 7.30 AM - 5.30PM.

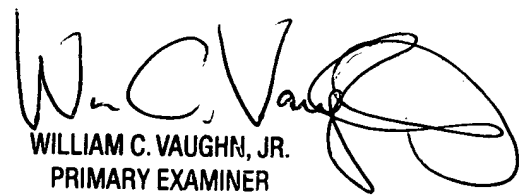
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn Jr. can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/814,426
Art Unit: 2144

Page 16


MD


WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER